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Introduction

Thank you, Mr. Chairman for having me here today. This is an exciting time: the United States is on the cusp of establishing a new Government Agency that will have sweeping responsibilities. It will enable us to more effectively respond to today's threats, through a streamlined and coordinated institution that will greatly enhance our ability to respond quickly, decisively, and where necessary, before threats against our homeland materialize. In short, we are on the verge of making history. It's critical that we get it right.

I want to state in no uncertain terms that like the Department of Energy itself, the National Nuclear Security Administration is fully committed to continuing support of the homeland security mission, and the successful establishment of the Department of Homeland Security. We recognize that this will require restructuring and relocation of critical assets now under the stewardship of the NNSA. We are prepared to support these shifts in responsibilities, and indeed, to do what is necessary to make any transfer of responsibilities as smooth and painless as possible.

There is an enormous amount of experience and expertise now residing in DOE/NNSA that will be vital to the success of the new Department. Our Science and Technology assets and capabilities have been applied to homeland security problems long before last September; and it is certainly the case that such contributions became more focused and accelerated after that day. We've accelerated the PROTECT subway demonstration, which will help provide chemical protection to the U.S. population. We deployed a prototype biodetection capability at the winter Olympics. We have greatly increased our work with the U.S. customs and coast guard with radiation and nuclear technology – specific areas that will directly benefit the new Department. DOE/NNSA is committed to ensuring that its assets can continue to provide enabling Science and Technology in support of homeland security and counterterrorism mission needs.

The capabilities we have are exemplary; by creating the Department of Homeland Security, the United States will be able to utilize all the better these assets. By establishing a clear prioritization of needs, defining a cohesive mission focus, and integrating these capabilities in ways that will eliminate stovepipes, the United States will strengthen its ability to respond to today's threats and those of the future.

I want specifically to discuss a number of capabilities currently residing in the Department of Energy that will be support or be transferred to the new Department. I want to describe them, discuss their role in supporting the homeland security mission, and note the unique assets they each bring to the table in supporting the new Department. They are the DOE/NNSA emergency response capability; our technology research and development assets; our nuclear detection assets; and advanced scientific research efforts related directly to counterterrorism.

Emergency Response

The Department of Homeland Security will assume the mission to prevent terrorist attacks within the United States, to reduce America's vulnerability to terrorism, and to minimize the damage and recover from attacks that may occur. DOE/NNSA capabilities to respond to a nuclear/radiological accident or incident will be strengthened by this identification of one Federal Government agency with its primary mission of Homeland Security.

DOE/NNSA marshals highly trained and unique scientific and technical expertise in support of the Lead Federal Agency (LFA). This expertise is drawn from across the nuclear weapons complex and is composed of 29 full time and ~118 part time Federal officials; 29 full time and ~ 320 part time National Laboratory staff; and, 11 full time and ~450 part time contractor staff = 70 full time, 870 part time.

Although nearly 900 individuals are involved with the nuclear/radiological incident response teams, through extensive matrixing and leveraging of resources, the cost to the government is only equivalent to 212 full time employees. This matrixing makes the response programs stronger and keeps the costs very low. The response teams are staffed with volunteers who, for the vast majority, work on ensuring the safety and reliability of the nation's nuclear stockpile day in and day out. These volunteers respond to staff a response team when called, much like a volunteer firefighter.

The Nuclear/Radiological Incident Response Programs

DOE/NNSA is prepared to respond immediately anywhere in the world with a variety of unique response capabilities.

The response capability most often heard of is the Nuclear Emergency Support Team (NEST), which provides technical assistance to the Lead Federal Agency (LFA). NEST is our program for preparing and equipping specialized response teams to deal with the technical aspects of nuclear or radiological terrorism. NEST capabilities include search and identification of nuclear materials, diagnostics and assessment of suspected nuclear devices, technical operations in support of render safe procedures, and packaging for transport to final disposition. Response teams vary in size from a five person technical advisory team to a tailored deployment of dozens of searchers and scientists who can locate and then conduct or support technical operations on a suspected nuclear device. NEST personnel and equipment are ready to deploy worldwide at all times.

A Nuclear/Radiological Advisory Team deploys as part of an FBI led Domestic Emergency Support Team (DEST) or as part of a State Department led Foreign Emergency Support Team (FEST) for an incident overseas to provide nuclear scientific and technical advice to the LFA.

If the location of a suspected nuclear or radiological device is not known, search operations may be required. NEST search teams are routinely configured to detect and locate a radiological source using a variety of methods ranging from hand-carried to vehicle-mounted search equipment. The basic building block for search operations is the Search Response Team. The Search Response Team stays ready to deploy on either civilian or military aircraft. Upon arrival on-scene, the Search Response Team can begin searching immediately or, can equip and train local responders, who are already familiar with the search area.

When a device is located, the specific resolution is dependent upon the political, technical, and tactical situation. The ultimate goal in resolving a nuclear terrorism crisis is to keep the terrorist device from producing a nuclear yield. DOE/NNSA Joint Technical Operations Teams have been designated to work

with military explosive ordinance disposal (EOD) teams during all phases of the crisis response. This approach also draws upon the personnel and equipment resources of the Accident Response Group (ARG). The ARG mission is to manage the resolution of accidents or significant incidents involving nuclear weapons that are in DOE's custody at the time of the accident or incident.

The Aerial Measuring System (AMS) aircraft carry radiation detection systems that provide real-time measurements of ground and airborne contamination, even very low radiation levels. AMS can also provide detailed aerial photographs and multi-spectral imagery and analysis of an accident site. AMS provides a rapid response to radiological emergencies with helicopters and fixed-wing aircraft equipped to detect and measure radioactive material deposited on the ground and to sample and track airborne radiation.

The Atmospheric Release Advisory Capability (ARAC) role in an emergency begins when a nuclear, chemical, or hazardous material is released into the atmosphere. ARAC's main function is to provide near real-time assessments of the consequences of actual or potential radiation releases by modeling the movement of hazardous plumes to provide emergency response officials with the vital immediate information they need to rapidly evaluate airborne and ground contamination projections and thus effectively protect people and the environment.

Along with many other assets, the response capabilities I have described above are clearly critical to any domestic response to a nuclear/radiological incident. Creation of a cabinet level Homeland Security agency holds promise for dramatic acceleration of improved capabilities against domestic threats. We in the DOE/NNSA are committed to the success of this new Department, and will work to facilitate it.

NNSA Nonproliferation and Verification Research Development Program

The NNSA Nonproliferation and Verification Research and Development Program conducts applied research, development, testing, and evaluation of technologies that lead to prototype demonstrations and resultant detection systems, strengthening the U.S. response to current and projected threats to national security worldwide posed by the proliferation of nuclear, chemical, and biological weapons and the diversion of special nuclear material. The R&D program is the technical base that provides operational organizations with innovative systems and technologies to satisfy their nonproliferation and counter-terrorism mission responsibilities. For FY 2003, the Non-Proliferation and Verification Research and Development Program has four major elements:

- Nuclear explosion monitoring, which will remain within the Department of Energy

- Chemical and Biological National Security, which will be transferred in its entirety to the Department of Homeland Security
- Proliferation Detection, and
- Supporting Activities

Within the proliferation detection program is an element on nuclear smuggling that will be transferred to the Department of Homeland Security. Proliferation detection has aspects that support both nonproliferation and homeland security. Those elements that can be disaggregated and identified as supporting homeland security will be transferred to the new Department. Where the activity supports both the homeland security and non-proliferation functions, we will examine such arrangements as joint programs. The Administration's proposed legislation gives the President the necessary flexibility to provide for joint operation.

Let me describe those functions that will be transferred, after which I will return to the subject of long-term coordination.

Major Activities Identified for Transfer

Within, the Nonproliferation and Verification Research and Development Program, the Chemical and Biological National Security Program and the nuclear smuggling detection activity fall squarely into the Homeland Security mission and thus have been designated for transfer in their entirety. The first Chemical and Biological National Security Program develops and applies detection technologies entirely for domestic homeland mission requirements, such as a prototype biological detection system used at the Salt Lake City Olympics and a prototype chemical detection system currently being installed in Washington D.C.'s metro system; and the nuclear smuggling detection activity directly supports the U.S. homeland nuclear detection requirements, such as a nuclear detection system designed for regional deployment, for example around a major city. These activities clearly fall within the mission area of Homeland Security and represent a necessary and prudent step. Now, let me describe to you in a bit more detail what both of these activities do.

Chemical and Biological National Security Program

The Chemical and Biological National Security Program works to develop technologies and systems to improve the U.S. capability to prepare for and respond to domestic chemical and biological threats against civilian populations, complementing DOD's focus on the battlefield and military installations. As part its primary nuclear science and technology mission, NNSA and the National Laboratories have developed extensive capabilities in chemistry, biology, and materials and engineering sciences that form the basis for the NNSA chemical

and biological national security program. We have conducted research on the biological foundations necessary to establish signatures of biological threat agents and develop assays certified by the Centers for Disease Control for those agents, which are applied to develop detectors. NNSA has conducted demonstration projects of prototype detector capabilities in partnership with other agencies that have operational missions, such as the systems I just mentioned that have been developed and applied for the Olympics and the Washington Metro, to illustrate possible system approaches for population protection. We are now working to expand the number of signatures and assays of biological agents that we can detect with increased sensitivity, and to improve public health response through the CDC. The next generation of bio-detectors will be more autonomous with capability to detect a much wider range of agents, which will enable public health agencies to rapidly move to treat affected people.

Homeland Security Nuclear Smuggling Activities

The nuclear smuggling component of our proliferation detection program also squarely fits within homeland security and will be transferred. NNSA and the National Laboratories, with their nuclear weapons program experience, have unique insight into nuclear proliferation activities — the facilities and infrastructure that would be necessary and the observable signatures of nuclear weapon development activity — and the capability to develop technical solutions for the U.S. government to detect and characterize such proliferation activities in their early stages. In this program, NNSA has worked closely with homeland security agencies, including U.S. Customs, U.S. Coast Guard, and the Departments of Transportation and Justice to apply this technical base to detection of nuclear weapons and materials at U.S. borders. We have previously conducted demonstrations with these agencies of radiation detection methods at an international border station, a port, a rail yard, and airport personnel and baggage handling facilities. With many of these agencies becoming part of the new Department, it is a good fit for the R&D applications to counter nuclear smuggling to be transferred to the Department of Homeland Security.

Coordination with Homeland Security

These transfers are both prudent and reinforcing of the efforts of Homeland Security and the NNSA to fight WMD terrorism. With the transfer of these programmatic responsibilities to the Department of Homeland Security, it will be critically important that the new Department maintain the commitment to support this technical base at the National Laboratories, so that the capability and the scientific atmosphere to pursue high risk, long-term research be encouraged in spite of the need to focus on short-term requirements for homeland security. Only through such investment will the scientific and technical

capability exist to meet the needs for innovative solutions to future homeland security problems.

With respect to the remainder of the proliferation detection program, no matter how the responsibilities are finally apportioned, the research will be of value to both departments. This is inherent in the broad nature of the research at the National Laboratories. Thus it will be important for us to work together closely so that both our nonproliferation and homeland security efforts will continue to benefit from the unparalleled capabilities of the National Laboratories. NNSA pledges to work closely with the Department of Homeland Security so that our research and development program efforts will be mutually reinforcing.

Nuclear Threat Assessment and Trafficking in Nuclear Materials

The Department of Energy's Nuclear Assessment Program was founded in April 1977 to provide a national capability to accurately and swiftly assess the credibility of communicated threats of nuclear terrorism. The Lawrence Livermore National Laboratory (LLNL) was chosen to lead this unique effort. Since September 1978, the Nuclear Assessment Program has been used to assess the credibility of over 60 nuclear extortion threats, 25 nuclear reactor threats, 20 non-nuclear extortion threats and approximately 650 cases involving the reported or attempted illicit sale of nuclear materials. DOE views the illicit trafficking of nuclear materials as an advance indicator of terrorism, most likely against the United States and close allies.

This operational capability currently consists of a small group of professionals who are collectively knowledgeable in nuclear explosives design and fabrication, nuclear reactor operations and safeguards, radioactive materials and hazards, linguistics analysis, behavioral analysis and profiling, as well as terrorist tactics and operations. The assessors are organized into specialty teams and operate in secure facilities at each of the three participating DOE contractor sites. An assessment Coordination and Communications Center at LLNL directs credibility assessment operations for the DOE and provides a single point of contact for federal crisis managers during emergency operations.

When activated, the DOE-based threat credibility assessment teams perform comprehensive technical, operational and behavioral assessments of communicated nuclear threats at the start of an actual or perceived emergency. Since communicated nuclear threats are a serious violation of federal law, the FBI is the lead federal agency. Decision-makers at the FBI, in concert with their counterparts at the DOE and elsewhere, determine the necessary follow-up actions to be taken and the time urgency of response based on the credibility assessment reports and other considerations. By completing high-quality "front-end" assessments, unnecessary and costly emergency responses can be avoided while appropriate response can occur in more serious or disturbing cases.

Selected elements of the Nuclear Assessment Program are routinely used to provide DOE technical support to the law enforcement, diplomatic, and intelligence communities. Major support activities include real-time assessments of nuclear black market transactions, ranging from attempted sales and buys of nuclear materials to reported thefts and seizures of material. In each case, a written assessment is transmitted to the referring agency. These reports include assessment conclusions on the authenticity of the alleged material, counterterrorism analyses, radiation and toxicity hazards associated with assessed material, linkages to prior cases, and recommendations for follow-up actions. In select instances, program experts are called upon to deploy to the scene of alleged nuclear trafficking activity to assist local authorities, or provide other in-field help based on the particulars of the case. In situations where actual seized nuclear material is available, the LLNL Forensic Science Center is used to analyze the material for NAP.

Like its companion nuclear threat assessment activity, this DOE program provides accurate and rapid analytical products. It can also provide in-field operational response, real-time technical advice and assistance, and state-of-the-art laboratory forensic support to various U.S. Government consumers, based on the issue at hand. Since Program inception, the Nuclear Assessment Program has developed close and working relationships with its counterterrorism counterparts in Customs, State, FBI, DIA, CIA, and others in the nonproliferation community. The Program also provides expert technical support to law enforcement and others for Special Event Preparedness, on-scene technical support, and national and international training.

Since 9/11 the Nuclear Assessment Program has performed approximately 70 assessment products involving communicated nuclear threats, reports of illicit trafficking of nuclear materials, and special analysis reports for law enforcement and intelligence components. Through its function of rapid-turnaround nuclear assessments, this national asset provided immeasurable support to all government agencies tasked with separating critical from non-critical information in the aftermath of 9/11. The entirety of the effort of the Nuclear Assessment Program has been to safeguard the Homeland from nuclear terrorism.

On a final note, there has been some confusion regarding Lawrence Livermore's role with regard to the new department. Let me note that I support fully the concept of locating the new Department's main research facility at Lawrence Livermore, with satellite centers of excellence located at other national laboratories. It will create a campus-like environment where scientists will be dedicated, full-time, to thinking about homeland security, and it will allow for direct interaction with the expertise that resides at the other DOE labs as well as other labs throughout the federal government. It's good for DOE and it's good for the Department of Homeland Security.

Conclusion

I want to reiterate in no uncertain terms: The National Nuclear Security Administration supports fully the transfer of the programs noted in Section 302(2) of the bill under discussion. The details of what would be included in the legislative package were worked out directly with my office. These programs are a natural fit for the Department of Homeland Security, whose primary mission is the critical task of protecting the United States from catastrophic terrorism. DOE/NNSA will also work to ensure that its assets can continue to contribute enabling science and technology in support of DHS mission needs.

Obviously, that is a goal that I am pleased to support wholeheartedly. I believe that the Bill as being discussed goes a long way toward its realization.

Thank you, and I look forward to any questions you may have.